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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/961,273	09/25/2001	Naoya Hashimoto	Q65705	8063
7590 12/01/2005				
SUGHRUE, MION, ZINN, MACPEAK & SEAS 2100 Pennsylvania Avenue, N.W. Washington, DC 20037		EXAMINER ROJAS, BERNARD		
		ART UNIT 2832 PAPER NUMBER		

DATE MAILED: 12/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/961,273

Applicant(s)

HASHIMOTO, NAOYA

Examiner

Bernard Rojas

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 May 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,8-11 and 15-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,8-11 and 15-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 8-11 and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukaya [US 4,942,325] in view of Freyman et al. [US 5,979,760].

Claim 1, Fukaya discloses an electromagnetic device body [figure 1] including a coil [51, 52] formed with a conductor wound around the bobbin [col. 14 lines 34-36] and

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a cover member [10, 20] enclosing the coil. A cover [2] molded around the electromagnetic device body with a molding pressure [col. 15 lines 4-20]. The cover member would inherently protect the coil from the molding pressure when the cover is molded around the cover member since it surrounds the coil.

Fukaya fails to disclose using a self-lubricating bobbin.

Freyman et al. teaches making an electromagnetic coil out of wire and a bobbin of self-lubricating plastic.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a self-lubricating bobbin as taught by Freyman et al., in order to reduce the friction between the wire and the bobbin caused by expansion and contraction of the wire during operation of the coil [due to thermal change in the coil].

Claims 9-11 and 16, Fukaya in view of Freyman et al. discloses the claimed invention with the exception of environment in which it is used. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use an electromagnetic device in various environments, since it was known in the art that an electromagnet of this design is useful in many devices, the specific environment in which the electromagnet is used is a design choice based on the user's requirements.

Claim 17, the cover member is cylindrical in shape [figure 2].

Claim 18, an electromagnetic device body [figure 1] including a coil [51, 52] formed with a conductor wound around a bobbin [col. 14 lines 34-36] and a cover member [10, 20] enclosing the coil; and a cover [2] molded around the electromagnetic device body with a molding pressure [col. 15 lines 4-20]. Wherein the cover member

would inherently protect the coil from being directly subjected to molding pressure when the cover is formed by injection molding, by covering said coil since the cover member surrounds the coil [figure 1].

Claim 19, an electromagnetic device body [figure 1] including a coil [51, 52] formed with a conductor wound around a bobbin [col. 14 lines 34-36] and a cover member [10, 20] enclosing the coil; and a cover [2] molded around the electromagnetic device body with a molding pressure [col. 15 lines 4-20]. Wherein the cover member would inherently have a material strength to protect the coil from being directly subjected to the molding pressure when the cover is molded around the cover member since the cover member surrounds the coil and prevents the cover material from contacting the coil [col. 15 lines 4-20].

Claims 8 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukaya [US 4,942,325] in view of Freyman et al. [US 5,979,760] as applied to claim 1 above, and further in view of Ghorashi et al. [US 5202187].

Claims 8 and 15, Fukaya discloses the claimed invention with the exception of the thickness of an outer coating of the conductor.

Ghorashi et al. discloses a conductor wire coated with an insulative material. The insulation disclosed is from 1 to 10 mils, at least 4 times larger than the average flash produced on a bobbin as disclosed by applicant.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the two teachings to provide a robust insulation that is

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stable to high temperatures and is resistant to water crazing, cracking and loss of coating [col. 1 lines 59-65].

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard Rojas whose telephone number is (571) 272-1998. The examiner can normally be reached on M-F 8-4:00), every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin G. Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Bernard Ravi*

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